

Claims

1. A method to boot up a server using a target storage device over a network, comprising:

installing an operating system by storing the operating system and a dynamic
5 configuration program in the target storage device on the network where the location of the target device is designated by an internet protocol (IP) address; and

accessing the operating system on the target storage device using the IP address and the dynamic configuration program, the accessing occurring through data block transfers.

10 2. A method to boot up a server as recited in claim 1, wherein the installing includes,

determining network system configuration after power on,

receiving instruction to install the operating system,

receiving the IP address where the target storage device is located,

15 finding the target storage device at the internet protocol (IP) address over the network, and

copying the operating system into the target storage device over the network using block data transfer.

3. A method to boot up a server as recited in claim 1, further comprising:

installing the operating system on an additional server by notifying the additional server of the IP address of the target storage device where the operating system is located.

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4. A method to boot up a server as recited in claim 1, wherein the operating system utilizes a graphical user interface.

5. A method to boot up a server as recited in claim 1, wherein the target
10 storage device is a one of a disk drive, a CD-R, and a CD-RW.

6. A method to boot up a server as recited in claim 1, wherein the server communicates with the target storage device by using iSCSI protocol.

15 7. A method to boot up a server as recited in claim 1, wherein the server includes an iSCSI card which facilitates iSCSI protocol communications between the server and the target storage device.

8. A method to boot up a server as recited in claim 1, wherein accessing the operating system includes,

accessing data at a first sector of a boot device, the location of the first sector being
5 located in the target storage device designated by the IP address,

retrieving the operating system boot loader at the first sector of the target storage device, and

booting up using operating system data from the target storage device.

10 9. A method to install an operating system on a server, comprising:

initiating setup to install the operating system;

receiving an IP address of a subsystem where the operating system is to be stored;

determining a number of storage devices located in the subsystem;

receiving identification of a target storage device selected from the number of
15 storage devices located in the subsystem; and

installing the operating system in the target storage device using block data transfer.

10. A method to install an operating system as recited in claim 9, wherein initiating setup occurs when a particular keystroke is received.

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11. A method to install an operating system as recited in claim 9, wherein determining the number of storage devices located in the subsystem includes,

instructing an option ROM BIOS to utilize a kernel to determine the number of storage devices located in the subsystem designated by the IP address.

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12. A method to install an operating system as recited in claim 9, wherein receiving identification of a target storage device includes,

displaying the number of storage devices in the subsystem,

receiving input indicating the target storage device to be used as a boot device.

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13. A method to install an operating system as recited in claim 9, wherein iSCSI is utilized as a data transfer protocol.

14. A method to install an operating system as recited in claim 9, wherein the
15 operating system is a graphical user interface system.

15. A method to install an operating system as recited in claim 9, wherein installing the operating system includes,

copying operating system files to the target storage device by using the IP address.

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16. A method to install an operating system as recited in claim 9, wherein installing the operating system includes installing the operating system on an additional server by notifying the additional server of the IP address of the target storage device where the operating system is located.

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17. A method to boot up a server using a storage device over a network, comprising:

retrieving an operating system boot loader at a first sector of the storage device, a location of the storage device being designated by an IP address stored during an operating system installation process; and

booting up the server using an operating system located on the target storage device by using the operating system boot loader.

18. A method to boot up a server as recited in claim 17, wherein data transfer of the operating system from the target storage device to the server accomplished by use of an iSCSI protocol.

19. A method to boot up a server as recited in claim 17, wherein retrieving the operating system boot loader includes,

instructing an option ROM BIOS to direct a kernel to obtain an operating system
5 boot loader at the first sector,

copying the operating system boot loader into memory on a server,

running the operating system boot loader to boot up the server.

20. A method to boot up a server as recited in claim 17, wherein booting up the
10 server includes,

copying operating system data to memory on a server.